CLAIMS

What is claimed is:

1. A method for fulfilling an order in a supply chain, comprising:

    receiving an advance demand notice representative of the order that includes a

5    specification of one or more items of interest to the customer; and

    using a network of intelligent agents to stage and manage the items specified in

the advance demand notice within the supply chain as a function of a probability of need

for each item.

10    2. The method as recited in claim 1, further comprising the step of extracting information

from a customer maintenance system to create the advance demand notice.

3. The method as recited in claim 2, further comprising the step of creating the advance

demand notice order in response to a change in a scheduled maintenance work order.

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4. The method as recited in claim 3, wherein the step of creating the advance demand

notice order in response to a change in a scheduled maintenance work order comprises

modifying an existing advance demand notice.

20    5. The method as recited in claim 1, further comprising the step of using an equipment

knowledge base to determine the probability of need for each item.

6. The method as recited in claim 1, further comprising the step of coordinating with a carrier to move the items within the supply chain.

7. The method as recited in claim 6, further comprising the step of using the intelligent agents to form a fulfillment plan for use in moving the items within the supply chain.

8. The method as recited in claim 7, further comprising the step of monitoring the movement of the items within the supply chain.

9. The method as recited in claim 8, further comprising the step of forming an alternative fulfillment plan for use in moving the items within the supply chain if the intelligent agents determine from the monitoring that the supply chain is unable to meet a previously formed fulfillment plan commitment.

10. The method as recited in claim 1, further comprising the step of ordering product from a supplier to initiate the staging of items within the supply chain.

11. The method as recited in claim 1, further comprising the step of ordering product from a supplier to replenish the items staged within the supply chain.

12. The method as recited in claim 1, further comprising the step of using a customer defined level of service to stage and manage the items specified in the advance demand notice.

13. The method as recited in claim 1, further comprising the step of determining if the probability of need for an item specified in the advance demand notice is 100% and, if so, converting the advance demand notice into a purchase order for that item.

5   14. The method as recited in claim 1, further comprising the step of using the current and developing states of inventory within the supply chain to stage and manage the items specified in the advance demand notice within the supply chain.

15. The method as recited in claim 1, further comprising the step of taking into account a

10   desired level of safety stock when staging and managing the items specified in the advance demand note within the supply chain.

16. The method as recited in claim 1, wherein the advance demand notice includes a probability of need for each item.

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17. The method as recited in claim 1, further comprising the step of using sourcing options specified by a customer to provide alternatives to the items specified in the advance demand notice.

20   18. A method for fulfilling an order in a supply chain, comprising:

extracting from a customer system information pertaining to the work order that specifies a piece of equipment to be repaired and items expected to be used during the repair procedure;

determining, using an equipment knowledge base, a probability that each of the items will be needed to effect the repair procedure;

using the determined probability to stage the items within the supply chain whereby the items are made ready for use in the repair procedure;

5         extracting from the customer system information pertaining to a completion of the repair procedure; and

using the information pertaining to the completion of the repair procedure to populate the equipment knowledge base for use in future probability of need calculations.

10    19. A method for fulfilling orders in a supply chain, comprising:

receiving a first customer order specifying planned purchase items having a probability of need of 100 percent;

receiving a second customer order specifying planned purchase items having an uncertain probability of need;

15         determining the probability of need for the items in the second customer order; and

using the determined probability of need to move items within the supply chain to simultaneously fulfill the first customer order and the second customer order.